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Original Articles

SURGERY OF GALL BLADDER.*

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I SHALL not attempt to discuss this most interesting subject in many of its phases and ramifications, but shall recount some of my own personal experiences and observations.

We are proud of the achievements made by students of internal medicine in the diagnosis and treatment of this class of disease—especially in the last quarter of a century; but the accomplishments of the surgeon are of no less importance, for thousands of lives have been saved and much suffering averted by the progress made in this particular field—the surgery of the gall bladder and ducts. Operations upon these organs are becoming more and more common, the technique more delicate, and the results more gratifying every year, and with the rapid strides in other abdominal work, surgery in this direction has kept even pace. It is scarcely twenty years since the first cholecystotomy was made in England after the method employed by the distinguished American surgeon and first gynecologist, Dr. Marion-Sims; and not until 1889, ten years ago, was the common duct opened, a stone removed and the wound in duct systematically closed by an American surgeon, Dr. Henry O. Marcy, of Boston.

Early and accurate diagnosis and early interference have robbed these diseases of many terrors and saved many lives and much suffering.

In my experience of the surgery of the gall bladder and ducts, I have met the following conditions, some existing alone, others complicated: Cholecystitis, with obstruction of the cystic duct by other agencies than stones; cholecystitis, with obstruction caused by stones; suppurating cholecystitis, with obstruction of cystic duct; empyema, suppurating cholecystitis, with cholelithiasis; hydrops, with stones obstructing cystic ducts; gall stones in gall bladder; gall stones in cystic duct; gall stones in common duct; gall stones in gall bladder, cystic duct and common duct, and in the ramifications of the hepathic duct; cholecystitis and choleangitis, which means inflammation of all the ducts complicated with cholelithiasis; cholemia with hemorrhage.

Among the reasons for operating upon the cases I have above enumerated were the following: Distended gall bladder, causing pain with slight jaundice; frequent attacks of biliary colic; frequent attacks of biliary colic with jaundice, jaundice being more pronounced with each attack of colic; urine loaded with bile; evacuations of ashy hue; chills and intermittent pyrexia; persistent jaundice; persistent vomiting; anorexia and cholemia, with its attendant ills.

The operations performed were: Cholesystotomy, cholecystostomy, cystotomy, choledochotomy, cholecystectomy and choledocholithotomy. In the diagnosis of all these diseases; that which calls the attention of the patient to his condition is pain; pain in the region of the liver and a peculiar pain which has been in general terms denominated biliary colic, and this being such a prominent symptom we may well discuss its importance. Pain is one of the most potent factors in a differential diagnosis. The pain that proceeds from an ordinary attack of cholangitis, inflammation of the ducts or a cholecystitis, inflammation of the gall bladder, may not always be readily accounted for or satisfactorily located until obstruction of some kind has taken place or jaundice has become manifest. Even then it may be confounded with other disturbances under the great head of hepatic diseases. Biliary colic or gall stone colic early declares its individuality; it is a colic of its own kind, with ear-marks that cannot be mistaken: with no marked prodroma, the pain comes on suddenly of a most excruciating type; the patient moans and writhes in agony. It as suddenly disappears and leaves him tranquil, or it may persist for hours, days or weeks, with occasional intermissions and remissions.

Gall stones most generally have their beginning in the gall bladder, and it is while taking their perilous journey through the cystic duct that most pain is occasioned. The duct is small and during the chronic inflammatory period the stone may have acquired some considerable dimensions before it becomes engaged in the duct. The contraction of the duct upon the stone, too large to pass through it without tearing and otherwise injuring its walls, probably occasions

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the first and most aggravating attacks of biliary colic. The incarceration and inflammation about the stone, either in the cystic duct or other ducts, occasion colic of a milder form but of indefinite duration. The retention of bile and other products bind the stone, cause pain, both from the over-distention of the gall bladder and ducts and the pressure upon the stones occasioned by the efforts of these organs to expel them.

After a violent attack of colic the concretions may be found in the feces the following day and no immediate recurrence may ensue, but if the pain is protracted through days or weeks or months, it means incarceration and obstruction. All gall stones do not cause violent pain; we frequently find them resting in innocuous desuetude (Cleveland) in the gall bladder. The mouth of the cystic duct has thus become occluded, not permitting their escape; they have increased in size until they have filled the bladder If no infective agent intervenes or no inflammation is set up by friction or pressure on the part of the stones themselves, they remain undiscovered indefinitely.

The great variety of diseases which affect the gall bladder and ducts are but stages and products of inflammation which runs the gamut from a simple catarrh to a distinctive suppuration. One of the products of chronic inflammation is gall stones, but gall stones are not of mushroom growth, the products of a night, perfect in form and development, but a development through many weeks, months or years; they are the fruits of disease. Stones are not found in a healthy stomach, nor in a healthy kidney, nor in a healthy urinary bladder, nor in a healthy gall bladder; they are the fruits of other ills. One of the products of the inflammation of the gall bladder and ducts is an excess of mucus and a disproportion of mucus and bile, which favors fermentation and precipitation of the bile salts. The precipitated salts may be blended with free organic material and form a putty-like mass, which later by segmentation or division may form the many individual faceted stone so commonly observed; but it is more likely that the future stone is formed about a nucleus of some cast-off organic matter in the presence of these precipitated salts.

Gall stones vary in size, shape, appearance and composition; in size from a grain of sand to a hen's egg; in shape they may be round, elliptical, irregular or polyhedral; in appearance from lightest yellow to darkest green. In composition they consist largely of cholesterin, the mixed cholesterin being the most common type; they are yellow or yellowish green, soft, oily, easily crushed, seldom existing alone, frequently in large numbers, and are faceted by erosion with its fellows. The round stones are nearly pure cholesterin, coated on the outside with bile pigments and mineral salts. They are rough and spiny; when cut through show a brilliant white radiated structure. Then there is the laminated stone whose strata are stained by different colored bile pigments. Others possessing more of the mineral salts are hard, small and irregular in form, with a great variety of color. The size and composition have great bearing upon the future history of the stone. A small even stone may pass readily through the ducts; a large one may plug them, and a rough, spiny one tear and mutilate them and cause the most excruciating colic.

Gall stones may occlude the ducts and whenever obstruction exists, so does jaundice; or otherwise expressed, all jaundice is obstructive, whether associated with some inflammatory trouble or from a stone plug, and is due to the absorption of the bile from the obstructed bile channel. The obstruction may be intra- or extra-hepatic in the greater or smaller ducts. As pain to a considerable degree depends upon the location of the stone, so the degree of jaundice depends upon the location of the obstructing stone. A stone in the cystic duct usually causes excruciating pain, but little jaundice. After an attack of colic associated with the cystic duct there is usually a show of jaundice, which soon disappears. If a stone is wedged in a common duct the colic is not of a spasmodic character, but of a dull, aching, grinding nature, and jaundice is persistent, increasing in intensity after each acute exacerbation. The bile at no time passes freely by the stone, but only trickles around it, and during an attack of colic is absolutely arrested. During this period of forced retention, absorption of the bile is much increased; pain then is diagnostic of gall stones and their location. Jaundice is equally significant and declares the site of the obstruction.

Having decided upon the location of the disease and determined to operate, the technique is of the greatest importance. The character of the operation depends upon the pathologic conditions. Under all circumstances the abdomen is to be opened at a site where the greatest freedom will be at the command of the operator. An incision should be begun at the ninth costal cartilage, through the expanded portion of the rectus and continued along its outer border as far down as may be required. The opening completed, the gall bladder should be exposed, packed about with gauze and aspirated; for you do not always know whether it is filled with a bland, healthy antiseptic bile or a fluid reeking with infective bacteria; whether the sterile fluid of a hydrops or the pus of empyema. An incision large enough to fully admit the index finger should be made in the fundus of the bladder and any stones or other debris removed. Should the obstructing stone be immovably fixed in the cystic duct, cystotomy should be done. If wedged into the common duct at any point so securely that it cannot be pushed back in the gall bladder, choledochotomy, or incising the common duct, is your

only recourse. The obstruction removed, the incised ducts should be sutured. To complete the operation a cholecystostomy or abdominal fistula should be established for the purpose of relieving the strain on the sutures in the wound of the duct, and a gall bladder distended by a morbid fluid or occupied for any length of time by biliary calculi is of itself in a diseased condition and must undergo a retrograde metamorphosis, the effete material removed. In other words, the gall bladder requires both rest and treatment, which can only be accomplished through an external communication. Cholecystotomy is the operation par excellence to relieve a large per cent. of all biliary troubles, and a temporary opening can be established between the bladder and the outside by fixing the walls of the incised bladder and the parietal peritoneum. The fistula will quickly close after the drainage tube has been removed.

Ideal cholecystotomy, opening the bladder, removing its contents and immediately closing the wound and dropping it back into the abdominal cavity is neither practical nor scientific. Choledochotomy or choledocholithotomy is always a difficult operation. Fortunately for the operator, he is not approaching a tube of its normal physiological proportions, but increased many times in size. Dr. Van Hook of Chicago devised a method of distending the tube with air. This can more successfully be accomplished with water; the water passing down to the calculus distends the tube on the side looking toward the bladder. The obstruction is then easily located and cut down upon, and much tedious dissection is avoided in order to reach and isolate the tube.

By giving a short history of some of the cases upon which I have operated and the methods employed for their relief, I can better convey what, in my opinion, seems most practical and accomplishes most good.

The kind of an operation required and the best method of carrying it out:

The first case I shall describe was the second operation for cholelithiasis made in St. Louis—an obstruction of the mouth of the cystic duct by a calculus, followed by hydrops.

Mrs. M——, aged 47, admitted to the Protestant Hospital May 25th, 1887, twelve years ago; was mother of three children and had always enjoyed good health until one year previous to this time. The first symptoms were dull pain in the region of the liver, with a constant desire to eructate; always felt if she could get up the gas she would be relieved; some pain in the epigastric region, but most pain at the angle of the scapula. There was a very slight jaundice which came and subsided with each attack.

Examination revealed a large tumor in the right side, extending below the line of the umbilicus.

Diagnosis. — Either distended gall bladder or echinococcus.

Operation.—Abdomen opened. Tumor exposed and aspirated. Over a pint of transparent fluid withdrawn. The stones in the bladder were then easily felt and seventy-nine were removed, one from well down in the cystic duct, completely obstructing it. Gall bladder was drawn up and stitched to the skin. A discharging fistula still remains. Complete recovery, except the fistula, which the patient has never given her consent to have closed by plastic operation.

Entered hospital in September, 1890: Mrs. K——, aged 40; mother of six children; health poor for two years, repeated attacks of colic, slight icterus followed each exacerbation; no tumor discovered.

Operation. — Cholecystostomy, by two stages; twenty stones removed from the gall bladder; drained for several weeks; recovery; no recurrence.

Entered hospital in November, 1893: Mrs. R——. Had biliary colic for a number of years; attacks very painful, but only lasting a short time, and with the last attack chills and fever, and great tenderness over the region of the gall bladder; very little jaundice. There was considerable thickening, hardening and swelling of the walls over the tumor. An abscess formed and was opened and one large calculus with a considerable quantity of pus and bile escaped. Its size and rough exterior account for the great amount of pain it caused. Patient fully recovered after a short convalescence.

Mrs. F——, from Lennox, Ia., mother of one child, had frequent attacks of colic for three years; large tumor; no jaundice; stools and urine normal. Entered the hospital in October, 1893. Cholecystostomy made; eight ounces of bile, mucus and other debris removed. Fistula remained open. First attempt made at closure of the fistula failed. While stitches held and wound was closed, patient very uncomfortable; gall bladder became distended and great relief followed giving way of the stitches and opening up of the fistula. One year later I made a plastic operation. Some tissue was removed. An area of three-fourths of an inch square of the bladder exposed without breaking through the peritoneum; with a series of concealed sutures the wound was closed from bottom to top. It healed promptly. Patient entirely recovered. Has given birth to one or two children since the last operation. No recurrence.

Mrs. L——; entered hospital March 4th, 1899, at St. Genevieve, Mo., aged 59; married at 18 years of age; had no children; always in good health until the summer of 1898. The first symptoms were occasional pain in the right hypochrondrium. No marked change until March of 1899, when there was considerable aggravation of the trouble, with nausea and persistent vomiting, with fever and slight icterus. Upon examination a small tumor was located just below the border of the ribs, which was painful upon palpation.

March 28th; bladder exposed, aspirated, and then incised. The serous, muscular, and mucous walls were all greatly thickened. Several ounces of thick greenish fluid, with some pus, was removed, and a considerable amount of soft, putty-like matter. Its color was yellow and its consistency was like soft putty. Upon examination this soft material proved to be cholesterin and organic matter. By one author it is claimed that this is one of the stages which sometimes takes place leading up to the formation of calculi, or that calculi are sometimes formed by segmentation or the breaking up of this soft mass into many parts and that by friction and erosion the corresponding surfaces of the stones become smooth, and as a result we have a collection of faceted stones. Patient recovered and left hospital well.

Mrs. B——, aged 35, married and the mother of four children; had repeated attacks of colic for five or six years; admitted to the hospital February 7, 1895. Pain all the time; icterus pronounced; constipation.

Operation.—Cholecystostomy and choledocholithotomy. Adhesions were extensive and all structures about hilum of liver stained with bile. Patient recovered. Fistula persisted for three years; closed finally without operation. Hernia now of considerable dimensions: was four months pregnant at the time of operation. Child was born at the full term, blind in one eye and never healthy, cried continually and lived but one month. Mother is in good health at the present time.

Mrs. S——, entered hospital in November, 1895, at St. Louis; married, mother of nine children; aged 42; always healthy, except frequent attacks of chills and fever; had occasional attacks of biliary colic for thirteen years, sometimes at very long intervals, frequently many months, and once several years intervened without any recurrence. Three years previous to this date attacks became frequent and pain constant; obstinate constipation, stools occasionally clay colored; urine thick, dark, and stained linen. Hemorrhage at the menstrual periods most profuse, lasting two weeks. Had bleeding piles and bronze skin. Cholemia pronounced. Confined to her bed almost continually six months before operation; operation made in December, 1896—cholecystostomy and choledocholithotomy. Seven stones removed from the gall-bladder; recovered, and well at the present time.

Mrs. S——, 30 years old; married and the mother of two children; was admitted to the hospital October 21st, 1896; had suffered from attacks of biliary colic for a number of years. When she consulted me the acute exacerbation had ceased, but there was a constant pain, slightly exaggerated at intervals; jaundice was profuse; skin bronzed. A cholecystostomy was made and all accessible stones removed. Patient mproved and returned to her home November 21st, 1897. She again entered the hospital; fistula was closed and her general condition was much worse than when she first came to me. She had almost uncontrollable uterine hemorrhages and several hemorrhages from the bowels; cholemia with all its symptoms was manifest. The gall bladder was again opened, but there was profuse hemorrhage from its thickened walls and from every freshly incised stricture. The case seemed hopeless, but I again reached the common duct and endeavored to remove all the stones. There was no septicemia, but she had grave gastric disturbances. The patient died December 24th, from exhaustion and cholemic poisoning. The post-mortem revealed no large obstructing stones, but small calculi clear up into the substance of the liver in the ramifications of hepatic ducts (gall stones in all the ducts) and a diffuse inflammation of all the ducts.

Mrs. M——, entered hospital in Nov., 1898, aged 41; married, eight children. Unusually large and well-developed woman. Had attacks of biliary colic for eight years, occurring one every two or three months. In the beginning, after every attack, she passed two or three stones. These attacks occurred regularly for five years, and then there was an interval of two years, during which time she felt perfectly well. Again the colic returned, and during the last year she has been a great sufferer; pain, while not so severe, was constant. Icterus quite general; stools sometimes ashy, at others slightly stained with pigment; urine high-colored; large tumor felt deep down close to the median line, nearly in line with the umbilicus. Gall bladder not apparently enlarged and tumor independent of it. Patient had chills and intermittent pyrexia. Operation made November 15th, 1898. Gall bladder and common duct opened and all stones possible removed. I explored the tumor, which I found was situated just where the common duct enters the duodenum, and as my finger slipped into the mass I found I was in a pocket filled with bile and bile salts and small calculi. The adhesions were so abundant and firm, apparently surrounding the whole gut, that without trying to tear them loose I cleaned out the pocket and packed it with iodoform gauze, and then made a provisional cholecystostomy. Patient recovered from the operation. Some bile and mucous escaped from the drainage tube for two weeks, then nothing came away and the fistula closed. On December 14th patient had another attack of colic. On the 15th I cut down on the scar, opened the bladder, without getting into the peritoneal cavity; only mucous escaped, but in five days bile began to escape intermittently and continues up to the present time. Patient seems perfectly well. Digestion good and stools entirely natural in color.

Mrs. W——, entered hospital in February, 1899, aged 38; two children; has had frequent attacks of

biliary colic for two years, last three months; almost constant pain over the entire hepatic region, in right shoulder and back of neck.

Operation made February 16th, 1899—cholecystostomy cystotomy. Found one large mulberry stone in the cystic duct. After the stone was removed, bile flowed freely through the gall bladder and patient improved rapidly until fistula closed. She then began to have pain and jaundice. The pain was not as acute as that caused by the stone in the cystic duct, but each day the jaundice grew more severe; and both together pointed to a common duct biliary obstruction.

On May 13th, last Friday, I again opened the belly and the gall bladder, and by use of a method suggested by Dr. Van Hook of Chicago I used water instead of air. I located and removed another stone. The patient is doing well.

Dr. Van Hook's method for locating a stone in the common duct (*Annual*, February '99) is to run a purse string around the opening made in the gall bladder, introduce the nozzle of a syringe, draw the purse string about it and tie it; then inflate the bladder and tubes. The inflation will extend to the obstructing point. I found, however, as Dr. Van Hook did, that the air escaped about the nozzle of the syringe, and got around the stone and passed into the duodenum, even if the bile could not.

To determine the patency of the ducts, not having in mind the idea of locating and removing a foreign body, Dr. A. H. Ferguson used a single rubber bulb syringe and bulbous pointed glass tube and injected water. I brought into use the suggestions of both Drs. Van Hook and Ferguson—the purse string and syringe of Van Hook, and water instead of air. The water did not escape as readily as the air. I at once located the stone, removed it, and then the water passed freely into the intestine. By this method you easily isolate the ducts, avoid blood vessels, and not nearly the amount of dissection is required. There are other advantages.

I will call your attention to this specimen, No. 8. It is half of a large calculus that was removed, post-mortem, from a patient who died from intestinal obstruction caused by this stone at the ileocecal junction. She had suffered for years from biliary colic. The stone had ulcerated through into the bowels, at or near the opening of the common duct.

INTESTINAL DISTURBANCES OF CHILDREN.*

By Eugene Thompson, M.D., East St. Louis, Ill.

MEDICAL literature during the summer months is replete with able articles on this subject, and each of us during the heated term is confronted with this disease in its various aspects, from slight catarrhal forms which need but little treatment, to the very grave and fatal forms which tax our resources and skill in vain. These diseases are mostly prevalent in summer; hence we must consider heat as one of the causes, probably the most potent one, yet we must remember that it takes several parts to make a whole; and while in these diseases heat is one of the most important parts, the whole cannot exist unless there are others as well; therefore we may consider as causes—unsuitable food, suitable food improperly given, filthy surroundings, cachexia, malnutrition, dentition, neglect and ignorance. Heat, then, or rather a certain degree of temperature, must obtain. Under sixty degrees we meet with little intestinal disturbance, because the heat is then not sufficient to produce great putrefactive changes, or to make the growth of bacteria unusually active. We know that the view now universally held is that diseases of this character are of bacterial origin. The greatest mortality of this disease is very likely in July, and is caused not by the increased heat of this month alone, but by the infants with less resisting power being the first to succumb.

Children who are artificially fed are more liable to these diseases than those who receive their natural nourishment at the breast. Holt states that of 1,963 fatal cases only three per cent. were breast fed. According to statistics these diseases affect children between the ages of two and six years, or those past the weaning age; or they may affect those younger who are fed upon cow's milk. Cow's milk contains in summer a very large number of bacteria, and these are increased by the age of the milk and the intensity of the heat. It must be, then, that the germs gain access to the body by means of milk; but, of course, it is not impossible for water to be a vehicle, and the symptoms may be intensified by poisonous products already generated in this milk by the bacteria. This very likely explains the fact that in some cases the symptoms are manifest almost immediately after the taking of milk.

The predisposing causes are general and local; general: feeble constitution, malnutrition and filthy surroundings; local: deranged digestion, caused usually by improper feeding. Digestion being deranged, there remains in the stomach and intestines food which rapidly undergoes fermentation; bacteria develop, which of course previously existed, but up to this time had gained no foothold by reason of there being no favorable soil for their development.

In the opinion of most authors the different forms of intestinal disturbances are only different in intensity and degree from each other. Of the different varieties of acute diarrhea we have, first, mechanical diarrhea, produced by the ingestion of substances which virtually act as foreign bodies, viz.: poorly cooked foods, dried fruits, or fresh fruit containing

*Read before the St. Clair County Medical Society, at Belleville, Illinois, September 7th, 1999.

seeds, green corn, radishes, cabbages and cucumbers. The irritation from these may produce only increased peristalsis and secretion, cramping and pain, all of which will probably cease as soon as the foreign bodies have become expelled. Fever in such cases may or may not obtain. If the case is seen soon enough and proper treatment instituted, it is quite likely there will be little constitutional disturbance. The treatment at once suggests itself, viz.: ridding of the alimentary canal of the foreign substance, which, in my opinion, is best done by the administration of a full dose of castor oil, two drams to half an ounce, according to the age of the child. This thoroughly sweeps out the canal, causes little griping, and has a soothing after-effect. However, if there is much disturbance of the stomach the oil may be rejected. If this condition should obtain, I know of no better substitute than calomel, as it has a very favorable effect upon vomiting and is an excellent antifermentative as well. If increased peristalsis still persists, it may be quieted by some form of opium, providing there are no contra-indications to its use. For several days after the attack the diet should be light. Of course, other symptoms than those mentioned may arise, and they must be met by appropriate measures.

There is a form of diarrhea known as eliminative diarrhea, which likely results from nature's effort to rid the system of some toxic element. The diarrhea of acute infectious diseases belongs to this category. The point to consider in such cases is not to allow the diarrhea to become too great a drain on the patient, but at the same time results might be disastrous should the discharge be checked too suddenly.

In the form of diarrheas above mentioned we have no intestinal lesions, but in the form next to be considered there is involvement of the mucous and submucous coats in the majority of cases. In acute intestinal indigestion diarrhea is a very common symptom. The cause is likely found in the mechanical irritation of particles of undigested food, or by the putrefactive changes which often take place in food which lies undigested in the alimentary canal. The causes of this disease are much the same as those which cause the intestinal disturbances above mentioned; along with these may be considered a previous disposition to intestinal inflammation.

The symptoms sometimes develop suddenly, and sometimes they come on gradually. If suddenly, gastric disturbances are prominent; but if the onset is gradual the stomach may remain undisturbed. Local symptoms are colicky pains and diarrhea; constitutional symptoms, fever prostration and nervousness. The stools may vary in number from four to twelve daily; at first yellow in color, then yellowish green, and then grass green. These stools are usually acid in reaction, often sour, and very foul. They are at first thin, and in a very few hours become fluid entirely, except when they are always mixed with undigested particles of food. If the case begins abruptly the fever is higher and the prostration is greater than if the onset had been gradual. Restlessness, due to pain, may be noticeable, or else instead we may have apathy and dullness. The course and termination of this disease will depend upon the condition of the patient before the attack, its surroundings, nursing and treatment. If the patient has previously been healthy, with good surroundings, good nursing and competent medical attention, the severe symptoms will likely rapidly subside, and in a very few days the patient may be entirely well. If the opposite conditions obtain, the case may be very protracted, and a fatal termination may even result.

If we bear in mind the cause of this disease, the treatment will, as in the preceding forms, suggest itself, viz.: unloading the alimentary canal of the cause of the trouble, and after this is done securing as much rest to the parts as possible; for the former nothing is better than castor oil or calomel, say in one-fourth grain doses every two hours until the effect of it is seen in the stools. So much fluid is lost through the stools that thirst is very great, and this is intensified by the fever. Digestion is feeble, or is altogether arrested, and for this reason it is folly to give foods for at least twenty-four hours. During this interval fluids, as albumin water, whey, or cold water, may be given as often as every twenty or twenty-five minutes. If there is much prostraton, stimulants in the form of brandy may be given. After the alimentary canal has been rid of its irritating contents, if excessive catharsis persists, opium in appropriate doses should be given.

The most difficult problem the physician has to confront is the feeding of such cases. In nursing children the breast may be given after twenty-four hours, but not longer than five minutes at a time, while the nursing intervals should be greatly lengthened to five or six hours. If the child is artificially fed, or if it is past the weaning age, cow's milk should be withheld for three or four days, and then be given greatly diluted. For an infant under six months one part milk to seven parts water should at first be used; and to this may be added milk sugar, about one teaspoonful to eight ounces of the food. The diet of older children should be much the same as that of infants. Later, after the acute symptoms have subsided, meat broth and eggs may be allowed, but their effect on the stools must be watched. All cereals, vegetables and fruits must be withheld until the patient is entirely well.

I now come to consider the form of intestinal disturbance, the term of which is erroneously applied to all forms of diarrhea, viz.: cholera infantum or summer complaint. In this class of diseases a marked

condition of toxemia exists, and the toxic products exert themselves on the heart, lungs and nerve centers, as well as on the vaso-motor nerves of the intestines.

This disease bears a striking resemblance to Asiatic cholera. Before this disease asserts itself there have usually been some intestinal disorders, but the parent has not thought the child sick enough to need the services of a physician. The onset is sudden, and purging and vomiting are generally the initial symptoms, although first there may have been great prostration and an increased temperature. First, the food is vomited, and then serum, mucus and bilious matter. If this subsides it will be easily excited by the taking of food. The bowels move often; ten or fifteen stools may occur in half a day. At first they are pale-green or yellow, but later they lose all color.

Under the microscope, the stools show epithelial cells and a vast number of bacteria. Loss of weight is very rapid, the eyes are sunken, the features are sharpened, the corners of the mouth drawn down, and the child presents a very old aspect. In the beginning the child is irritable and in very great pain, but later this gives away to dullness and apathy. There is elevation of temperature in the fatal cases, rising to 104 to 106 degrees, but in the cases most likely to recover it does not run above 102 or 103 degrees. Owing to the intense thirst, fluids are taken with avidity, even though they may be almost immediately vomited.

Such intense symptoms rarely persist but a day or two, when either death or signs of improvement are noted. In the first we have hyperpyrexia, cold clamy skin, absence of radial pulse, coma, and stupor. In the latter, after a day, the discharges diminish, but restlessness and irritability may persist; eyes may be half open, temperature possibly subnormal, retracted abdomen, and the patient showing no desire for food. These symptoms may all gradually abate and the case go on to a tedious and slow recovery. The younger the infant the more grave the prognosis; and Holt states that no matter what treatment is employed fully two-thirds die.

In treatment, our first efforts are to rid the stomach and intestines of their irritating contents. This is probably best done by washing and irrigation. As a rule, the condition when we first see the patient is so critical that we have no time to wait for the action of cathartics. As the poison has already affected the heart and nerve centres, our attention must be given to these, and appropriate measures employed to counteract this poison. For prompt action there is likely no superior to atropin and morphin, hypodermically administered, in dose suitable to the age of the patient. The severe drain on the patient must be supplied, if possible, and the intercellular injection of a normal salt solution possibly more promptly fulfills this indication than any other method.

The reduction of temperature is best accomplished by baths. Of course, the intelligent practitioner will treat special symptoms as they arise. It is impossible in a paper to draw a complete picture of any disease. Some of the features laid down in the books are almost certain to be lacking, and again other symptoms may be present that the books may fail to mention.

The next form of disease is one in which the lesions are more deeply seated than in the class of diseases heretofore mentioned, where recovery or death takes place before the lesions become any more than superficial. In ileocolitis the lesions are more deeply seated; the lesions are usually found in the lower ileum and colon. In the severer cases infiltration may be so great as to result in the formation of catarrhal ulcers. While the lower ileum and colon are most seriously affected in many cases, there are marked changes in other portions of the intestines, and even in the stomach.

There are several forms of ileocolitis, viz.: simple catarrhal form, severe catarrhal form, and membranous form. This latter is the most serious, and, owing to the lack of time, is the only one that I will describe. It is most often seen in infants between the age of six months and two years. The disease begins abruptly with vomiting and high fever, and large fluid stools. The vomiting may desist after 24 hours, but the temperature remains high throughout the disease. Often the intestinal symptoms are so overshadowed by cerebral symptoms, such as prostration, stupor and delirium, that a wrong diagnosis may be made. The abdomen is tender and usually swollen, and intense tenesmus almost always obtains and consequent congestion of the rectum. Blood in the stools is always constantly present, and, should they be washed, shreds of membrane may be seen.

This disease usually last less than two weeks; death may take place from sepsis or exhaustion. This disease may be confounded with typhoid fever, but the latter is hardly ever found in children under twenty months of age; but if we bear in mind that typhoid fever is characterized by slow invasion, and that the onset of ileocolitis is sudden, a mistake of this kind will not be likely to occur. The prognosis must be guarded, for it is usually bad in cities, especially among the children with filthy surroundings, and it is particularly unfavorable when high temperature, frequent vomiting, much blood in stool, and great prostration are present. There is great liability to a return of such attack, and the patient having once been afflicted is never out of danger until the hot season is over.

Treatment.—A change of air is needed and should always be advised, especially when the case has

assumed the subacute or chronic form; if possible, keep the child out of the city until the first of October.

The dietetic treatment should be the same as in acute enteric infection. Stop cow's milk if it has been given. Feeding such cases is a difficult problem. We must depend upon peptonized skimmed milk, beef juice, broths and liquid peptonoids. As nourishment is of the primest importance, we must see that the child gets it; if it refuses to swallow any nourishment, forcible injection of food into the stomach may be resorted to. All foods and stimulants may be given in this way. A careful record of the food given a child must be made, and feeding should not take place oftener than every two hours, and even after convalescence is established great care about the diet must be exercised. Medicinal treatment should be much the same as the forms already spoken of; after free purgation and irrigation of colon, opium and bismuth may be given, the former to relieve the tenesmus and the latter for its antiseptic properties. Bismuth is not readily dissolved, and may act in a mechanic way. As the pathologic condition can in a measure be reached by irrigation, this method of treatment has many advocates, and not without reason. A normal salt solution is harmless, and by means of a male catheter can be passed high up into the colon. This should be done at least twice a day. If there is much tenesmus local injections of ice water, or very warm water, will prove very beneficial. We will find that stimulants will need to be given in almost all cases. Brandy is probably the best, largely diluted with water.

Notes and Items

Dr. M. F. Engman has resigned the editorship of the *Medical Gazette.*

The following is the programme of the St. Louis Medical Society of Missouri, Saturday evening, October 28th, 1899: "Appendicitis from a Surgical Standpoint," by Dr. Pinckney French.

A bill has been introduced in the St. Louis Municipal Assembly looking towards a change in the manner of conducting the medical affairs of the new City Hospital. It is proposed to assign the work to a visiting staff, instead of to the Superintendent. A somewhat similar bill was defeated last spring.

A new danger is said to be found in Turkish tobacco. A report to the Marine Hospital Service says that tuberculosis is spreading rapidly in the Turkish tobacco factories in Constantinople. It is said that in preserving the peculiar odor of Turkish tobacco it should be exposed to the air and light as little as possible; hence in the rooms where these workmen are employed there is very little ventilation and the room becomes filled with dust, which quickly develops a chronic bronchitis and ultimately tubercular infection.

Bareggi's test for differentiating tuberculosis from typhoid fever is based upon the different behavior of the clotted blood. It is made by drawing a half-dram of the patient's blood into a test-tube and setting it aside. In the cases of typhoid fever clotting takes place slowly, and at the end of twenty-four hours there has been very little retraction of the clot, and consequently the amount of serum exuded is very small. The reverse is seen in tuberculosis; here the blood coagulates promptly; there is quick and vigorous retraction of the clot and abundant serum poured out.

There is a striking difference in the compensation given medical men abroad and in this country in the filling of official positions. Upon the continent practically all physicians connected with hospitals, policlinics, etc., receive a salary. In France the compensation of hospital physicians is small, rarely exceeding $500 a year, while in Germany the compensation of a hospital physician is never less than $1200 in the smaller cities, and in the larger places the amount frequently reaches two or three thousand dollars, assistants being paid correspondingly. The principle of compensation is fairly well maintained.

The health of Dreyfus has been the subject of conflicting accounts in the Paris press. Professor Pozzi, who has had charge of him, says that he presents the appearance of a person who has just completed a long sojourn in the tropics and has been affected with paludal fever and in addition has suffered severely from dysentery. He is much emaciated, with atrophied muscles, and the arms appear as if suspended from the shoulders by strings. He suffers much from cold, is unable to digest much food with the exception of milk, and is affected with nausea. At thirty-nine, he appears like a man of sixty, and he will never regain his original vigor.

Parafine has been described as an adulterant of oleomargarine, and is said to have been employed for this purpose since 1893. The publicity given to the matter at that time apparently led to the discontinuance of the practice; but again it has appeared, numerous cases of this adulterant having been found in New York. The amount ranged from 5 to 11.6 per cent., the gross quantity weighing about six pounds in a sixty-pound tub of oleomargarine. It is claimed that the purpose of adding this substance to oleomargarine is not to cheapen it, but to make a more monogeneous mass, as it prevents the separation of the fats and oils. The oleomargarine containing parafine is with difficulty distinguished from butter. It is by no means certain that parafine is harmless, but it is certainly devoid of nutrient value.

Under the auspices of the University of Chicago has been established what is known as the Chicago Physiological School. It is intended as a home for boys and girls who are unable to take their places in the public schools or to maintain themselves in the average class by reason of illness or infirmity.

The increasing frequency of poisoning by carbolic acid, has led the English Government to place it upon the list of registered poisons included in the pharmacy act of 1868. Some years ago the Pharmaceutical Society showed why this substance should be placed on the list of registered poisons; but the Government took the ground that the gain to the public would not be commensurate with the interference with individual rights from the restriction. Before the Government could act it was necessary to have a decision from the Pharmaceutical Society, and that body lost no time in acting on the invitation thrown out. Accordingly they recommended that carbolic acid in crystals, commercial carbolic acid, and liquids containing more than 10 per cent. of the substance, should be declared poisons within the meaning of the pharmacy act of 1868.

Leech fishing is an industry which is carried on in Lake Copais, in Western Greece, and it is said by the *Montreal Pharmaceutical Journal* to be the most disgusting and cruel occupation connected with pharmacy. The neighboring region is a damp, miasmatic, foggy district—a breeding place of ague, chills, and splenic fever. Lake Copais is said to be literally packed with members of the eel family. The fishermen employed in securing leeches are of the lowest class. The outfit consists of wicker baskets and long wooden boxes with holes in them for packing the leeches when they are caught. Early in the morning the fishermen wade out into the shallow, muddy water and stir up the leeches with long sticks. After the leeches are in motion horses are lead into the shallow places and the leeches attach themselves to their bodies, then they are taken out and the leeches removed. The most painful part of the operation for the horses is the removal of the leeches, the biting causing little discomfort.

M. V. Torkomian read before the French Academy of Medicine an article upon an Armenian physician of the Twelfth Century, named Mekhitar, who was born in the District of Her, in Persian Armenia. This physician was very celebrated among his countrymen, but until the present has been unknown to the medical world. He belonged to the group of *savants* who contributed so much to the intellectual glory of this small country. Mekhitar is known by his treatise on fevers, written in the ancient Armenian language, of which it is said that but one copy exists, to be found in the National Library, Paris. The treatise is fairly complete and contains many original ideas, as well as the views of physicians who preceded him. Torkomian gave an analysis of the work to the Academy of Medicine and promised a translation of the text in the near future. A copy of Mekhitar's work was brought to Paris in the seventeenth century by L'Abbe Villefroy. The work of Tokomian opens a new chapter in the history of ancient medicine in Asia.

An extensive series of experiments were made by Dr. Lippincott to determine the best method of sterilizing cutting instruments and keeping them aseptic. All the other modes in vogue for sterilizing cutting instruments were found to be more or less defective, causing roughening of the surface and a dulling of the cutting edge. Formaldehyde had no injurious effects if the exposure was not continued beyond twenty-four hours; at the end of three days, numerous rust spots developed. A moderately strong formalin solution turns a blade black in a few hours and destroys its cutting qualities. The addition of three per cent. of borax to the same solution entirely prevented its corrosive action on the blade. He comes to the conclusion that a twenty per cent. formalin solution containing three per cent. of borax may be trusted to kill germs and it is devoid of corrosive action. He has used knives which have been kept in such solution for three months, and their cutting qualities were not impaired. The fluid remains practically unchanged, if not exposed, though it may be well to add a small quantity of formalin to the solution every three months. German silver handles are not attacked in such solution.

At the last meeting of the British Medical Association there was an animated discussion on the medical tests required for admission to the British Service, civil and military. Sir Dyce Duckworth held that a moderate degree of color blindness ought not to be a bar to military service, and he mentioned the large number of rejections which occur every year from bad and deficient teeth. This, he thought, ought to be remedied by dentistry. Osler, of Baltimore, stated that these examinations ought to take place early in the course of training, so that, if rejected, a candidate would be saved all possible trouble. There were two grounds for rejection with which he did not always agree with the authorities, namely, a systolic murmur transmitted to the carotids and a respiratory murmur, chiefly met with in young, thin-chested men, and the albuminuria of adolescence. The former usually disappear, and the latter was only grave where there was a history of acute specific fever or cardio-vascular changes. The relation of height to admission to the army was discussed by Dr. T. D. Sawill, who stated that the healthiest and strongest in the British Army are the drivers of the Royal Artillery, who are taken at a

height of 5 feet 2 inches and 5 feet 3 inches. Height as a test of efficiency was fallacious. A great change has come in modern times as to the qualifications of a soldier; what is now wanted is ability to endure and to shoot straight, the former being especially conspicuous in men of moderate stature.

A tribute to Langenbeck is found in a recent article by Carl Beck: "Whoever saw von Langenbeck operate must have had the impression that he was an aristocrat in the best sense of the word. He had a most pronounced sense for natural cleanliness. It was not customary at his clinic to wear sterile gowns before the introduction of antiseptic rule, but the students always wondered why the master always wore a long, peculiarly-made Prince Albert coat, which fitted highly over the neck, while operating. This coat was always cleaned very thoroughly, sometimes to the disappointment of the operating nurse. There was a great contrast to the non-esthetic customs at other clinics of the same period. The hands were frequently washed, and the instruments, sponges, and the ligature material were kept extremely clean. Von Langenbeck's technique was that of an artist. His work was as delicate as a watchmaker's. His anatomic knowledge enabled him to make his skin incision in conformity with the deep seat of the lesion which indicated the operation. Naturally he could also carry out his steps rapidly. Thus by the short duration of the operation he exposed his patient to a smaller risk of infection. His gentle handling of the tissues in general, his aversion to blunt operating, his predilection for sharp and clean instruments, were all points which counterbalanced to a certain degree the preantiseptic shortcomings. Such accomplishments should by no means be regarded as unimportant in this mondern era. The surgeons should strive zealously to come as near to such perfection as possible."

The Code of ethics which has split the profession of the State of New York into two rival factions is one of the most deplorable dissensions that has ever occurred in the profession. In a recent letter to the *Medical Times*, Professor Phelps stated the position of the New York State Medical Society, which includes the great majority of the better men in New York State, to be as follows:

"Your letter of August 22d is received. In answer I will say that the only code of the New York State Medical Society is that of the army and navy: 'That discipline is only applied for conduct unbecoming a gentleman.' Ethics never made gentlemen; but gentlemen do make ethics, and one of the reasons why the medical profession is growing more gentlemanly is because the laws of the several States have placed a certain standard for admission to the study of medicine. That standard is so high in several States that the loafer or the blackguard is excluded, because he never had the personality requisite for higher education, which is one of the qualifications for admission to the study of medicine.

"The New York State Society cares not what a man practices or what he believes. It is a question of what the man is and what he does. This, it seems to me, covers this entire question, over which there has been so much bad blood.

"It is a question with us of morals, and morals always governs principles. If morals are bad, principles will be bad, code or no code. You cannot get blood out of a turnip, neither can you get gentlemanly or honorable conduct out of a dishonorable loafer, whether he is in the medical profession or in the pulpit. This is our code."

C. E. Riggs, in a recent article on therapeutic suggestion, says that the growth of credulity has kept pace with the growth of science in the nineteenth century. He finds that suggestion is the key which unravels the success of magnetic healers, divine healers, faith and mind cures, osteopathy and Christian science. It is only cases amenable to suggestion that the irregular practitioner can cure. If we could restrict their operations to those cases alone little harm would be done; but the results are deplorable when organic disease comes under the care of these healers. Besides the cases of definite organic disease, for which suggestive treatment is nothing more than murderous, there are a vast number of mixed cases in which true organic conditions are complicated by psychic conditions. These present some of the most difficult problems with which a trained physician has to deal. A campaign of education is the only successful method of preventing the spread of quackery. First of all, the physician must educate the masses. Until recently the profession scoffed at healing by suggestion and has treated all manifestations of such phenomena as puerile, because they have been performed by persons devoid of wisdom and skill. While the physician has frowned, the quack flourished; at the bottom of his almost bottomless incompetency has lain the one actuality that psychic symptoms can be met by psychic remedies. When the profession fully understands and is prepared to make use of this actuality, charlatanism will be driven from its stronghold, as ignorance and fraud will be deprived of its most important weapon. We have still something to learn about the application and value of therapeutic suggestion. When we have mastered this, we must educate the laity so that they will no longer regard perfectly simple phenomena as miraculous. It will do for the irregular practitioner to play upon the credulity of his victims, but the man of science will find himself better aided by the intelligence and coöperation of his patient where this is possible than by their fatuous expectancy.

MEDICAL REVIEW

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DISEASES OF THE AGED.

Presbytiatrics is a name proposed for a new specialty in medicine devoted to the study of the diseases and conditions affecting the aged. It is claimed that we now have a special branch known as pediatrics, and there is no reason why, if the diseases of the young are specially studied, the conditions affecting old age should be overlooked. It is claimed that hygiene of old age is relatively of greater importance than that of the early years of life.

PSYCHOLOGIC STUDY OF JURORS.

A timely paper upon this interesting phase of modern justice is contributed by Dr. T. D. Crothers in the *Medical Record*, October 21, 1899, which would not be without effect were it brought before our lawmakers. The necessity and urgency for reform in this particular are clearly brought out by the arguments of the writer.

The uncertainty of jurors and the capricious, whimsical character of their verdicts are accepted as inevitable, and explained as part of the natural weakness of the mind. From a medical and scientific point of view, the average twelve men are usually incompetent naturally and are generally placed in the worst possible conditions and surroundings to exercise even average common sense in any disputed case. The average jury is unable to pass judgment on, or even to comprehend in an adequate way, many of the questions submitted to it. Practically, also, these men are placed in the most adverse hygienic conditions for healthy brain and functional activity. They are confined in a close, badly-ventilated court room and are obliged to sit in one place five or six hours a day. In cases of capital crimes they have changed diet, changed sleeping rooms, imperfect exercise, continuous mental strain; intelligent and sound brain reasoning would be impossible under these conditions. They become listless, abstracted and finally fall into a state of veritable mental confusion. The average juryman becomes more incapacitated to rise above his prejudices or to reason impartially every day he is confined to the court room.

SCIENCE VS. THE ART OF OBSTETRICS.

A recently written article in the *Iowa Medical Journal*, from the pen of W. W. Eastburn, has some valuable hints on the practical application of late scientific methods in obstetrics. The writer devotes special attention to "pelvimetry," which was recommended in every case by a certain writer. He often wonders if the writers who are so voluble in devising theories or formulating rules for others to follow, ever in a single instance followed out the same theories or rules. He has grave doubts if any of them ever had much acquaintance with a country practice and the difficulties to be met with in trying to apply their ideal theories to the stern realities of an intensely practical back-woods labor case. To his way of thinking, a knowledge of the business in hand and tact to meet emergencies as they arise are better than theories. The man in the thick of the battle knows more about warfare and practical fighting than the theorist who sits at home and tells how it ought to be.

"Every physician with horse sense enough in the first place to grind through a medical course, ought to know enough to thoroughly asepticize his hands with hot water and carbolic acid or alcohol before beginning a labor case, and take all necessary precautions, antiseptically, for the welfare and safety of the patient, without having full directions and rules to that effect staring him in the face from every third page of his medical magazine. Most of the writings upon this subject handed down to us by those who affect a much higher altitude, are not at all applicable to our country cases. In a goodly share of this practice, our first intimation of the case in hand is the clanging of the door-bell in the middle of the night, accompanied by the admonition to 'Hurrry up, Doc; John Smith's woman's in a bad way;' or the galloping of a horse reeking with sweat up to your office door, and the rider yelling out so he can be heard five blocks up and down the street: 'Say, Doc., you're wanted out to Bill Jones' just as quick as you can get there;' and then as he turns to ride away he looks over his shoulder and adds, in a voice two octaves higher than before, '*It's a baby case.*' You grab your case, rush for your team, touching only the high places as you apply the whip for fear of not being in at the finish, or of being told as you drive up, 'It's all over, doctor, and you're too late.' Where would pelvimetry come in then? What use would your interspinous, external,

internal and true conjugate, right and left diagonal be here? What good would it do to know that the bi-temporal or occipito-mental exceeded the trachelo inter-trochanteric bregmatic by one-sixteenth of an inch? It seems there is too much of a tendency to overdo in this matter—to go to seed as it were.

"Let us suppose a case: Mr. Bromo calls at the office of Dr. Seltzer and informs him his wife will need his services in her coming confinement, and wishes him to take charge of the case. So in due time Dr. Seltzer drives out to Mr. Bromo's and finds Mrs. Bromo very busy putting out her washing. The doctor walks in and says: 'Mrs. Bromo, your husband has engaged me to attend you in your coming labor, and I have come to begin my duties.' Mrs. Bromo looks scared, and says: 'Yes; but, doctor, it will be a month yet before the fullness of my time, and I am feeling quite well just now, I thank you.' 'That's all right, Mrs. Bromo, but this is an age of progress; the science of medicine and obstetrics is advancing with rapid strides, and the old fogy way of waiting until labor pains begin before summoning your physician has passed away with the rest of the dark ages—a relic of barbarism. We do things differently now. As up-to-date physicians we must catch step with the head of the procession, so as not to miss the music when the band plays. My duty as your medical adviser is plain. I have come to-day to perform *pelvimetry* upon you, to see if you are capable of becoming a mother.' 'What is that. doctor?' 'To be plain, then, I must take the measure of your pelvis to see if the interspinal, external, internal and true conjugate, right and left diagonal and inter-trochanteric diameters are sufficient to admit of the passage of the bi-temporal, bi-parietal, occipito-frontal, occipito-mental, trachelo-bregmatic diameters and circumference of the fetal cranium.' 'Yes, doctor, I understand; but what if it isn't?' 'Madam, we will not discuss that point; I see I am wasting time;' and the doctor proceeds to his duty in the most approved methods. And after he has looked to her general condition, and showered attendance upon her for the ensuing month, and ten days after, having presented his bill for a hundred dollars, if the husband doesn't chase him off the place with a shotgun it is because he is out of shells or has traded it off for a baby carriage—and it would show good horse-sense if he did."

HOW FAR HAS SPECIALISM BENEFITED THE PRACTICE OF MEDICINE?

The old question of the general practitioner and the specialist comes, from time to time, before the medical world and runs a short course through the medical press. We read of the ease which falls to the lot of the specialist in contradistinction to the hard work of the general practitioner; the peaceful sleep of the one and the wakeful nights of the other. The one is pointed out as a worker, the other as a drone, who sips the honey which is provided for him and gives naught in return. Apropos to this, a recent paper by Buckley (*Philadelphia Medical Journal*, October 21, 1899) is as convincing as it is interesting. His conclusions are:

1. The work of individuals in special lines has advanced the science and art of medicine.

2. Special study has classified diseases more clearly and simplified nomenclature. In the single department of dermatology the advances begun by Hebra have been carried on by successive specialists, so that to-day the subject is far more readily understood by the general practitioner than it was fifty years ago.

3. Obscure conditions of disease have been discovered and elucidated. In many departments symptoms have been grouped and classified and the nature of the disease elucidated in a manner quite impossible without special work.

4. Not only have specialists discovered and developed new lines of thought and practice, but they have aided the ordinary practice of medicine by the clear description of disease which they have given in every branch of medicine.

5. Treatment has in many cases been greatly simplified and crystallized and many new measures and methods have been introduced, which may be employed by the general practitioner.

6. All discoveries and advances have been given in a free manner to the general medical profession. By means of lectures and clinics the specialists have made every effort to enlighten the general practitioner in regard to each branch.

7. The specialist has also advanced the ordinary practice of medicine by the aid he has constantly given in relieving conditions which the general practitioner would never have accomplished alone.

8. Incidentally, specialism has benefited the practice of medicine by a certain education it has given the public in regard to the pecuniary value of professional services.

ENGLISH MEDICAL PROFESSION OVERCROWDED.

The overcrowding of the medical profession in England is again attracting the notice of the leading journals. The *Lancet*, in a recent publication, shows that the population in England has increased during the last ten years at the rate of 7.5 per cent.; the whole number of qualified practitioners has grown at just three times this rate. There is one physician to every 1,272 people. The latter figure shows that it is impossible for many of the profession to obtain a livelihood. Strikingly different are the numbers in Russia, where there is one physician to each six or seven thousand inhabitants, the total number being some 18,000 physicians in a population estimated at about 125,000,000.

Current Medical Literature

DERMATOLOGY AND GENITO-URINARY DISEASES.

The Connection Between Asthma and Eczema.—H. N. Taylor* reports a case which points to the fact that whatever the condition of the bronchial mucosa is, whether catarrhal or erythematous, it is in close sympathy with eczema. The patient was a boy of eight years, whose mother suffered from asthma. At the age of six the patient had a severe attack of eczema which persisted for six months. During the following year he had another severe attack. While this was clearing up he had his first attack of asthma. Then for a few months he suffered from asthma and eczema, the attacks being sometimes concurrent, sometimes definitely alternating, sometimes overlapping each other. When seen for a recent exacerbation of the dermatitis, the flexures of the hands, wrists, arms and legs, his face and trunk were in a pitiable condition. After a few weeks' treatment this condition was becoming materially ameliorated, when he presented himself one morning with a typical asthmatic attack. The theory that asthma may be due to some sudden vascular engorgement or erythematous blush of the bronchial mucosa should be considered, for the very sudden rise and fall of the bronchial symptoms militates against the view that asthma is really "eczema" of the bronchial tubes. Eczematous eruptions are anything but of an evanescent nature.

Treatment of Gonorrheal Orchitis.—Dr. Picot† speaks very highly of the use of salicylate of soda in the above affection, and reports thirty cases successfully treated by it. As these cases, as a rule, begin with coated tongue, anorexia and constipation, he commences his treatment with a purge—usually 40 grams of sulphate of soda or magnesia. Next day he begins the salicylate. He give four doses of 1 gram each during the twenty-four hours. He thinks the salicylate is better borne by the stomach when given in substance than in solution. Besides the salicylates, the patient must have perfect rest in bed, with the testicle well supported. In simple inflammation of the testicle and epididymis without exudation into the tunica vaginalis, and without tumefaction of the spermatic cord, the good effect of the treatment manifests itself sometimes as early as the first day; the testicle is not so sensitive to the touch, and becomes smaller and softer; the redness and heat of the skin are diminished. If the treatment is kept up, the improvement increases from day to day, and after four or five days it is difficult at first sight to determine which one of the testicles was the seat of the inflammation. Medication should be continued, however, for eight or ten days. In other forms of orchitis the good effects of the treatment are not evident as early, and it may have to be supplemented by other measures—as the local use of mercurial ointment with belladonna, etc. Sometimes when the patient appeared to be well for a few days there may be, much to our surprise, a reproduction of all the symptoms. This is due to one of two things: either the patient on feeling well discontinues treatment, or else he is costive. The indications in these cases are either to renew the treatment or to give a dose of sulphite of soda.

*N. Y. Med. Jour., Oct. 21, 1899.

†La Presse Medicale, Sept. 23, 1899.

The Contagiousness of Inherited Syphilis.—J. H. C. Simes,* from his experience and investigations, concludes with some of the more recent writers that, while there is a certain degree of contagiousness connected with inherited syphilis, it has been greatly overestimated, and the fear of every case of inherited syphilis being a source of danger is a very great exaggeration. To draw the line where contagion begins and where it ceases would be very desirable, and would tend to lessen our difficulties. Perhaps those cases in which there are present the so-called secondary lesions may be placed on the side of danger, while the absence of this class of lesions may exclude the fear of contagion. Such a conclusion may partly be accepted; but it cannot be true for all, since many cases must have been seen in which secondary lesions were present without contagion having been caused.

Surgical Diseases of the Kidneys.—L. Freeman.† At the present time nephrectomy is resorted to in extreme cases only, and then more often as a secondary than as a primary operation. In most early operations, where extensive destructive changes have not taken place, the danger in competent hands is next to nothing. Twenty-one cases are reported, which direct attention to certain interesting features. Blood in the urine may be due to movable kidney; complete recovery from symptoms several weeks after nephrorrhaphy. In nephralgic conditions internal treatment should be tried before operation is resorted to. Kidney symptoms may be referred to the pelvic organs, and the kidneys should be examined before resorting to serious pelvic operations. Early operation in injuries of the kidneys enable us to check hemorrhage, forestall the formation of an abscess, and save the peritoneal cavity from possible contamination. The safe procedure in secondary renal hemorrhage is prompt nephrectomy. Irritability of the bladder may be due to affections of the kidneys; the illusion may be so great, that the bladder has been frequently considered to be the seat of the trouble and treated accordingly. In so-called suppurative nephritis,

*Phila. Med. Jour., Oct. 21, 1899.

†N. Y. Med. Jour., Oct. 21, 1899.

with disseminated inflammatory foci, nephrotomy instead of nephrectomy may result in cure. When the renal substance appears to be totally destroyed, it may still be capable of performing its functions. Where soundness of the other kidney is uncertain, it is preferable to refrain from making a primary nephrectomy; later, if a fistula remain, a plastic operation may be attempted on the ureter. If this should fail, a nephrectomy may perhaps be done. One case of cystinuria is reported; but seventy-five cases of this rare disease are said to have been reported. Its etiology is involved in obscurity and no reliable treatment is known.

Urticaria Pigmentosa Following Chicken-Pox.—A. WOLDERT* reports a case of this rare affection occurring in a child 11 months old. One week after the rash of varicella had disappeared, reddish blotches were observed on the chest, involving an area the size of the hand. Within four days these became prominent and spread to the abdomen, thighs and rest of the body. The blotches were half an inch in diameter and bright red in color. When seen the entire body of the child, except the face and scalp, was covered with a light-brownish or salmon-colored rash, maculo-papular, or taking the character of wheals. It was not markedly itching in character. A brief description of urticaria pigmentosa is given. Atropin and pilocarpine have proved two of the most useful remedies. An ointment composed of naphthol, 30 to 40 grains to the ounce, weak sulphur baths and the application of a weak solution of Vlemingkx solution have been recommended.

EYE, EAR, NOSE AND THROAT.

Cases of Peritonsillar Abscess and Diphtheria.—T. HUBBARD † When we take into consideration the frequent association of pyogenic bacteria and the Klebs-Loeffler bacilli in apparently pathogenic quantities in the throat, it is remarkable that the end processes of their invasion so rarely co-exist. It is possible that a mild diphtheritic condition may be masked by a severe attack of quinsy. The clinical records of quinsy throat paresis suggest this, but the occurrence is rare, as it is not a feature of the literature of diphtheria. Two cases are reported, exhibiting both diphtheria and quinsy at the same time. Both patients died, and in each case other members of the family developed typhoid diphtheria. The virulence of the different bacteria, together with the age and resisting power of the patient, probably determines which type—false or true diphtheria, or peritonsillitis—shall predominate. In cases of this character, where pus is confined to tissue covered with a diphtheritic membrane, the question as to the propriety of an early incision is an important one. The more the surface is abraded the deeper will the diphtheritic infection penetrate, and the greater will be the absorption of toxin. Pus should be evacuated only through tissue already devitalized by softening; and vascular tissue should be avoided if possible. We should be guided by ordinary surgical principles, and first accurately locate the pus.

Thrombo-Phlebitis and Peritonsillar Abscess.—M. R. WARD.* While the natural tendency is for cases of peritonsillar abscess to run a favorable course, the experience of the writer and a study of the literature on the subject has shown the necessity of a more guarded prognosis. Two fatal cases of septic thrombo-phlebitis as a result of peritonsillar abscess are reported, both occurring within a period of four months. A brief résumé is given of the cases heretofore published. The two cases added to the list are as follows: Case I. A woman 30 years old, was seen three weeks after the onset of her illness; there was a peritonsillar abscess on the right side, and two days later an abscess developed on the right side of the neck, below the superficial fascia. Five days later the patient died. Autopsy showed the periosteum of the styloid process, axis and atlas denuded; cellular tissues of the neck disorganized and broken down. Thrombosis of the internal jugular and veins leading to the tonsillar plexus was found. Metatastic abscesses in the middle lobe of right lung and other foci of infection in apex and base of right lung. Spleen was enlarged to three times its natural size. Case II. A man 42 years old, expired suddenly four hours after admission to the hospital. Five days before a large abscess had been opened on the left side. Autopsy showed that the abscess in the left peritonsillar tissue had perforated the palatal muscles, the superficial cervical fascia and the sheath of the jugular vein. Thrombosis and thrombophlebitis of the internal jugular vein. Multiple small abscesses of the kidneys.

Secretion and Exudation as a Factor in Diseases of the Eye.—J. W. WRIGHT† believes that there exist within the living organism potent agencies of nature which carry on the elimination of any toxic element which may be in the blood. This effort is not always performed in the same manner, but the usual way, when it is revealed in the eye, is by exudation. In this process there is always present more or less inflammatory action. In the eye, too, conditions are present which have an important bearing. The first is a peculiar change in the vessels, which causes the blood, especially its corpuscles, to adhere to and pass through them, forming an exudate. The second is the proliferation of the cells thus formed. The loose connective tissue of which some parts of the eye are composed also favors the

*Jour. Am. Med. Ass., Oct. 21, 1899.
†N. Y. Med. Jour., Oct. 14, 1899.

*N. Y. Med. Jour., Oct. 14, 1899.
†Jour. A. M. A., Oct. 21, 1899.

exudative process here. The simplest type consists in the exudation of lymph-corpuscles, and is seen in the corneal ulcer of phlyctenular type. One of the most serious forms of non-suppurative type is seen in interstitial keratitis. The entire uveal tract is a prolific field for infiltrations, which often are absorbed, with or without atrophic changes; the best illustration in any affection of the eye is seen in iritis in any of its forms. Glaucoma seems to be due to an excess in the lymph occupying the suprachoroidal space, the direct product of an exudation from the choroidal vessels. As to treatment, iodide of potassium has been of the greatest service, outside of local treatment, in regulating exudative processes in the eye. In iritis, cyclitis, choroiditis and glaucoma positive effects have been noted. It has been known to relieve pain in these affections often as promptly as morphin and much more permanently. It is given in doses of sixty grains, in milk, without disagreeing with the stomach.

Nasal Stenosis.—B. S. Booth.* The reason why former operations for nasal stenosis due to deflected septa had not been successful was the fact that the residuary of the cartilaginous septum had not been thoroughly broken up. The Asch operation has given the most gratifying results in the writer's experience. His method of operation is described. After the crucial incision with four segments is made, the finger is introduced into the stenosed nostril, at the same time breaking each segment at its base. This is regarded as the most important part of the operation; for, in destroying the resiliency of the septum, it makes it impossible for it to resume its old position. A finely-fitting hard-rubber perforated splint is placed in the nostril which was stenosed and a smaller one is placed in the opposite nostril. The success of the operation depends on the manner in which the operation is performed and the attention given to the parts by the operator and the patient subsequent to the operation.

Effect of Atmospheric Changes in the Hearing.—Seymour Oppenheimer† reaches the following conclusions in a consideration of this subject, especially with reference to chronic catarrhal otitis media: 1. The hearing in at least 70 per cent. of cases with chronic catarrhal deafness becomes worse under adverse weather conditions. 2. The degree of impairment of audition, as influenced by atmospheric conditions, is determined to a great extent by the location and character of the pathologic process in the tympanic cavity. 3. The morbid alterations most susceptible to barometric variations are those of hyperplasia. 4. In purely atrophic changes in the middle ear weather variations have little or no effect upon the auditory function. 5. Atmospheric influences also impair the hearing by unfavorably affecting catarrhal processes of the upper respiratory tract and eustachian tube. 6. All things being equal, the impaired audition in chronic catarrhal otitis is diminished more (under unfavorable weather influences) in those whose general health is below par than in those otherwise healthy.

Treatment of Amygdalitis and Scarlatinal Angina by Carbolic Acid Injections. — H. J. Lipes* gives a brief résumé of the results obtained by him with the use of carbolic acid in 19 cases, all but two being children from eight months to fifteen years. In cases of diphtheria no beneficial effects were observed that could be ascribed to the carbolic acid injections, since antitoxin was used in all cases, together with other appropriate treatment. In five cases of scarlet fever immediate relief was obtained, with prompt reduction of fever and an improvement of the general condition. In four cases of simple amygdalitis prompt abortive measures were tried in conjunction with the injections of carbolic acid, and all responded quickly to the treatment. In cases of follicular and suppurative amygdalitis, when seen sufficiently early, positive results were obtained. The method of procedure is simple; the solution used varied in strength from one to four per cent. A few drops are injected into each tonsil at several points. A small syringe was used with a long needle, having a shoulder of about three millimeters from the point, to prevent too deep introduction and consequent injury to the larger vessels. A needle, having the extremity turned at an angle of 45 degress, permits the operator to inject the solution into the tonsils easily and safely.

Accessory Thyroid Gland at the Base of the Tongue.—A. W. Watson† reports two cases of this character. In one case direct inspection of the throat showed a rounded tumor rising behind the arch of the tongue, having a whitish patch on the top. With the mirror it was seen that a large smooth tumor occupied the base of the tongue from the epiglottis, which it pressed backward, to the circumvallate papillæ. To the finger it felt smooth and firm; it was ulcerated on top, the ulcer being covered by a white slough or membrane. It had been present for ten years and had only recently enlarged and produced symptoms. In the second case, the tumor resembled in every respect that of the first patient, except that it was not ulcerated. It had been present five years and had only given symptoms of late. Microscopic examination easily established the diagnosis of cystic thyroid tissue undergoing colloid degeneration. The tumor was removed by the electro-cautery snare; the wound healed promptly, leaving a smooth and apparently normal tongue. Thyroid tumors in this position are quite rare. They are developed from a persistent upper part of the thyreoglossal duct, which is formed in the de-

*N. Y. Med. Jour., Oct. 14, 1899.
†N. Y. Med. Jour., Oct. 21, 1899.

*N. Y. Med. Jour., Oct. 21, 1899.
†N. Y. Med. Jour., Oct. 21, 1899.

velopment of the thyroid gland, and opens at the base of the tongue at the position of the foramen cecum. The duct is usually obliterated after the eighth week of fetal life, but may persist, in whole or in part, throughout life.

GYNECOLOGY AND OBSTETRICS.

The Reflex of Air Into the Ureters Through the Air-Distended Bladder in the Knee-Breast Posture.—KELLY* has observed, when the patient is put in the knee-breast position and a catheter introduced as far as the renal pelvis, a little air sometimes enters, and escapes later in bubbles with the discharge of the urine. Sometimes, however, the air enters the ureter spontaneously before the ureteral orifice is touched, and is forced out in the form of a little bubble. This bubble has several times served as a guide to the position of the ureteral orifices. More frequently the air enters spontaneously into an inflamed ureteral orifice on a side which is discharging pus.

Early Rupture in Ectopic Gestation in a Tubal Diverticulum.—F. HENROTIN and M. HERZOG† report a case, from the history of which and after consideration of the macroscopic and microscopic examinations of the specimens obtained by operation, the following conclusions may be drawn: In this case an ectopic pregnancy occurred, located in a diverticulum of the tubal canal. This diverticulum was short and very probably traversed the fibres of the muscular coat outward in such a manner that it was covered by only a very small amount of tissue. The very thin outer covering of the diverticulum gave way very early in the course of the pregnancy—not later than the third week—under the influence of pressure and pressure atrophy, and a rupture and hemorrhage from the placental site occurred. At the time of this occurrence the ovum must have been alive, because there was no signs of previons hemorrhage or degeneration of the decidua and syncytial buds. Whether the diverticulum was congenital and due to an embryotic anomally, or acquired in later life in consequence of a pathologic process, is a question which could not be answered.

Three Years' Experience With Vaginal Suturing of the Round Ligaments.—H. N. VINEBERG‡ asserts, as the result of his own experience, that vaginal suturing of the round ligaments is indicated in all cases of retroversion and flexion of the uterus that give rise to symptoms, and in which a pessary cannot be worn. The child-bearing period is no contra-indication, as the processes of gestation and parturition are in no wise interfered with by the operation. It is also indicated in those cases of backward displacement associated with diseased and adherent adnexa of a moderate degree. It permits of the conservative surgical treatment of the diseased adnexa within certain limits. It is contraindicated in cases with shortened and infiltrated broad ligaments, also when the adnexa are markedly diseased, forming a conglomerate mass which is universally adherent. It is further contraindicated in cases of backward displacement of the uterus complicated with an ovarian abscess, or with adnexa which are firmly adherent high up in the abdominal cavity.

*American Journal of Obstetrics, October, 1899.
†N. Y. Med. Jour., Oct. 21, 1899.
‡Jour. Am. M. A., Oct. 21, 1899.

Digital Exploration of the Uterus. — W. E. SWAN* describes the methods in daily use in the German clinics for the digital exploration of the uterine cavity, and directs attention to some recent improvements in the technique in common use for securing, staining and studying the uterine mucosa. A thorough examination of the cavity of the puerperal uterus is a comparatively easy procedure on account of the patency of the cervix. He describes the method of gradual dilatation of the non-puerperal uterus with the sterile laminaria tent and the subsequent bimanual touch, with the exploring finger in the cavity of the uterus. The cavity is systematically explored with the finger, and any foreign substance, new growth, remnants of placenta, or changes of any kind in the mucosa or walls of the uterus, are at once felt, and can be removed by forceps or curette. Among the indications for digital exploration of the uterus are: (1) Hemorrhage associated with retained products of conception; (2) persistent bleeding, due probably to intra-uterine polyp; (3) submucous and intra-mural myomata may be detected in a similar manner; (4) cases with offensive or purulent, as well as sanguinolent, discharge, which so frequently accompanies adeno-carcinoma, a sloughing submucous myoma or sarcoma of the uterus. This method of examination should always be employed in every obscure or doubtful case of intra-uterine disease, especially when the tissues obtained with the curette fail to render the diagnosis clear and the symptoms persist after the first curetting. The methods of obtaining uterine mucosa for microscopic examination, and of hardening and staining, are described. Two cases are cited to illustrate the advantages of the anatomic as compared with the purely clinical methods of diagnosis.

Reconstruction of Pelvic Structures Incident to Lesions of the Perineum.—H. O. MARCY† emphasizes some of the points in the anatomy and the physiologic function of the pelvic structures in woman, an understanding of which is necessary in order to secure the reconstruction of those tissues more or less injured in parturition. Generally, the first important structure to yield is some point in the central union of the transversi muscles, and then the vaginal and vulvar structures rarely escape injury. The resultant is an injury and widening of the levator loop

*N. Y. Med. Jour., Oct. 14, 1899.
†Jour. Am. M. A., Oct. 21, 1899.

and the drawing to either side of the sundered transversi toward their respective origins. If the sphincter ani has not been injured by a slow process, a rectocele almost necessarily follows. If the sphincter is torn through, the pouching of the bowel cannot occur, and as a consequence the uterus is less likely to be displaced. The essentials of the operation for the restoration of the structures to their normal standard are briefly outlined, and the method of dissection is described. Vagino-rectal fistula proves one of the most difficult conditions for cure; it should be treated by lateral separation of the structures, closing the vaginal and rectal openings separately. In securing primary union, much depends on subsequent care of the patient by the nurse.

The Use of Gloves in Abdominal Surgery.—Bovee.* Experiments made in the bacteriologic investigation of hand sterilizations are practically unanimous in the conclusion that it is not reliable. It seems perfectly justifiable to employ extra precautions towards a protection of the patient from hand infection. The gloves employed are of different material, as silk, lisle thread, cotton, rubber and silk, etc. The opinions as to the choice of these vary greatly, but the impermeable rubber gloves seem to be by far the best. The rubber gloves are sterilized by boiling five minutes in a 1.64 solution of carbonate of soda, then being carefully filled with the same solution. They are then soaked five minutes in a 1 to 2,000 corrosive sublimate solution and dried. Sterilized talcum powder or French chalk is usually employed as a lubricant for fitting them to the hands. The hands are cleansed just as thoroughly when using gloves as without them. The advantages of rubber gloves in surgery are: First, protection of patient against infection from operator's hands, and, second, protection of operator's hands against infection from wounds.

Kolpotomia Lateralis.—Stratz† prefers the lateral vaginal incision to the anterior and posterior for the following reasons: (1) It is much easier to get one's bearings with special reference to the ureters; (2) the peritoneum yields so readily to the slightest manipulation, that a perforation is almost impossible; (3) the bleeding is reduced to a minimum; (4) a large tumor can be removed through a comparatively small incision, because of the elasticity of the vaginal walls.

INTERNAL MEDICINE.

Relation of the Stomach to the Non-Pregnant Uterus.—F. H. Murdoch‡ reports two cases showing how the stomach may be disturbed at the menstrual period, during the existence of exactly opposite conditions. In one case there was hyperchlorhydria, and in the second total absence of free hydrochloric acid. In both the symptoms of gastric disturbance were more marked during menstruation. Two other cases are cited where patients suffered from dysmenorrhea, the result of gastric ulcer. The direct cause of the painful menstruation in these cases must have been the irritation produced by the presence of solid food in the stomach, for both the attendant anemia and the circumscribed spot of tenderness were present in each case after the dysmenorrhea had disappeared; painful menstruation ceased when the patients were put on liquid diet and bismuth.

Lipemia in Diabetes Mellitus.—T. B. Futcher* reports a case of diabetes in which a fatty condition of the blood occurred. The chief features of interest in the case were the changes in the blood. A microscopic examination of fresh blood showed enormous numbers of refractile granules, which varied considerably in size, and showed very active Brownian movements. A small amount was centrifugalized, and the serum thus obtained, on comparison with that from a non-diabetic patient, was found to be turbid and milky in appearance; when examined microscopically, the serum showed enormous numbers of granules similar to those found in the fresh specimens. Some of the granules seemed to take on a slight black stain with osmic acid. Some of the milky serum was shaken up with ether, with the result that the turbidity was only in part cleared up. From the microchemical tests it would appear that the turbidity which existed in the blood was only in part due to the presence of ordinary fat; possibly the granules were in part made up of albuminous particles. The patient was seen again one month later, when the urine contained no sugar, and examination of the blood revealed the fact that the minute droplets had disappeared almost entirely and very few granules remained. The literature on the subject is briefly reviewed, together with the explanation advanced to account for the lipemia of diabetes.

Poisoning by Mercuric Chloride; Death; Necropsy.—Coates.† The interesting fact in the following case is that the patient survived the poison twelve days and died from perforation of the stomach. The patient, a man aged 42 years, drank a teacupful (about 40 grains) of a corrosive sublimate solution, and immediately felt a tightening pain in the throat and abdomen. Incessant vomiting was present, and three hours later diarrhea set in, accompanied by colic, clammy sweats and prostration. On the third day he felt some better; but all his teeth had become loose, and gums bled freely. There was practically a total suppression of urine from the first to the eighth day. The eighth day the patient commenced to vomit blood, which continued until death,

*American Journal of Obstetrics, October, 1899.
†Centralblatt für Gynäkologie, September 23, 1899.
‡N. Y. Med. Jour. Oct. 14, 1899.

*Jour. Am. M. A., Oct. 21, 1899.
†Lancet, Sept. 16, 1899.

four days later. The autopsy revealed a stomach slightly dilated, with a perforation in the greater curvature. No trace of the mercury could be found in any of the parenchymatous organs, save the liver.

Gangrene of the Lung.—A. H. LEVINGS* sums up his discussion on the subject as follows: 1. All cases of pulmonary gangrene, which are progressive and not absolutely diffuse, should be operated upon. 2. The gangrenous area should be localized by physical examination, aided by the use of the aspirating needle, and, if necessary, by multiple resection of ribs. 3. In the absence of pleuritic adhesions, the general pleural cavity should be shut off either by gauze packing or by a row of sutures. 4. After thorough opening and free drainage of the gangrenous cavity, it should be daily cleansed by gentle irrigation. 5. The cavity should be tightly packed with iodoform gauze. Two cases are reported: in one the patient made a slow and somewhat imperfect recovery, the wound bleeding after four months; in the second, recovery was perfect, and the wound healed in two months and a half.

A Case of Exophthalmic Goitre and Myxedema.—MAURICE FAURE† reports the following: Mrs. D., with negative personal and family history, began in 1886, when 32 years old, to complain of palpitation; after four years exophthalmos appeared and she became very irritable. In 1892 she noticed that she could not button her collar on account of a goitre the size of a small orange. After this patient began to complain of headaches, sweating spells and flashes of heat. The exophthalmos became markedly increased. Menstruation became irregular and diminished and diarrhea made its appearance, and during 1892 and 1893 it was almost incessant. In 1891 dyspepsia developed, the ankles were swollen at night and patient had attacks of oppression and restlessness and slept very poorly. Symptoms kept on with periods of improvement and exacerbations until 1896, when new symptoms appeared. Her face and neck showed myxedematous enlargement and she became sleepy, easily tired, dull. Her mental faculties were not so active as before, and she was greatly worried on account of loss of memory and loss of will power. An examination in 1896, when patient was seen for the first time, showed her to be very nervous, face large, skin and connective tissue thickened and hard. Marked exophthalmos and some nystagmus. Carotid pulsations were very marked. Pulse was strong and irregular, 100 to the minute. Heart was enlarged; apex on sixth intercostal space. No murmurs. There was rude respiration in both infraclavicular regions. Patient was given thyroid extract, digitalis, bismuth, bicarbonate of soda, as indicated. She improved for a while, but gradually grew weaker, and on the 6th of January, 1898, her pulse became almost imperceptible, and the heart's action weak and tumultuous. In addition there were marked dyspnea and edema; coldness and cyanosis of the extremities; abdominal walls swollen and distended, and there was some ascites. She died on January 8, 1898. A post-mortem examination showed lungs congested at the base and some tubercles on both apices in front. Heart dilated to double its normal size. Liver, spleen and kidneys congested. Brain normal, slightly congested. Thyroid gland enlarged to three times its normal size; weight 100 grammes; appeared to be hypertrophied only, without any other changes. Sympathetic nerve at the neck as well as the pneumogastric nerve normal. Eyes were not prominent and orbital cavities were normal. Cellular tissue of the face was thick, hard, and did not pit on pressure. All other organs are normal.

*N. Y. Med. Jour., Oct. 14, 1899.
†La Presse Medicale, Sept. 23, 1899.

The Peculiar Agglutinative Action of Blood Sera upon Live Spermatozoa.—NITFIELD* has used the spermatozoa obtained from the seminal vesicles of various animals, sterilizing the action of foreign sera upon them. If the fluid from the seminal vesicles of a guinea pig be diluted with normal salt solution, and a drop of blood from a guinea pig be added, the spermatozoa head for the leucocytes and cling to them, meanwhile lashing their tails violently. Red corpuscles cling to the places of least motion on the spermatozoa. In a few moments all the organisms become clumped. The interesting fact is that live motile animal cells act toward foreign sera as typhoid bacilli act toward typhoid serum, or any motile organism toward immunized serum.

Concerning a Periodic Swelling of the Parotid and Its Cessation During Pregnancy.—The case reported by FREUDENTHAL† is that of a young woman of 32 years. For 10 or 12 years, at irregular intervals, without any assignable cause, a redness and swelling appear near the ear, more frequently on the left side. These symptoms disappear completely during the periods of pregnancy. An interesting fact in connection with this case is that the husband has similar attacks. These are evidently hysterical in origin. The etiology of these symptoms, on the part of the woman, can not be found.

NERVOUS AND MENTAL DISEASES.

The Paralysis Following General Anesthesia.—W. M. LESZYNSKY.‡ The paralysis produced by pressure during anesthesia is preventable in every instance. As a rule it affects the upper extremities, and is occasioned by any of the following conditions: 1. Prolonged elevation and extension of the arms, allowing the head of the humerus to make pressure on the bronchial plexus. 2. Metal clamps or tight straps

*Lancet, Sept. 9, 1899.
†Berl. klin. Woch., Oct. 2, 1899.
‡N. Y. Med. Rec., Oct. 21, 1899.

over the shoulders or lower extremities. 3. Extension of the head toward one side, stretching the nerve trunks and rendering them still more susceptible to pressure. 4. Placing of the arm under the head and retaining it in the same position. 5. Permitting the arm or leg to hang over the edge of the table, making pressure upon some individual nerve. 6. The elbows of the anesthetizer resting heavily in the clavicular region, pressing upon the brachial plexus. The duration of the paralysis depends on the degree of injury to the nerve trunk and the recuperative capacity of the individual.

Shock; Its Nature, Cause and Treatment.—D. T. Nelson.* Every impression or stimulus applied to any cell or tissue which is less than the normal or exceeds it, tends to derange the whole, at least temporarily, and this derangement is shock or is of the same nature as shock, and it is always instinctive or automatic, whether it is reported by the way of the cerebrospinal or the sympathetic systems. The rhythm of nutrition is disturbed, metabolism is interfered with. Rest may bring recuperation and renewed life, if function and nutrition return and the vasomotor nerve-centers resume their command of the vascular system. The nature and cause of shock being understood, treatment will be readily suggested. 1. Preventive: When we can anticipate the danger, the best preparation is in perfect health and normal working of all the organs. 2. Hemorrhage, so far as possible, is to be prevented or reduced to a minimum. 3. Temperature: For the normal activities of the body an internal temperature of from 100 to 110° F. is required and this is normally maintained by the molecular changes in the tissues. When these changes are diminished or reduced, the abstraction of heat by exposure must be avoided and artificial heat supplied as far as possible. 4. Therapeutics: Atropin, cocain, morphin and alcohol have had their advocates, and all probably have a certain efficiency in suitable cases. Direct treatment of shock consists in quiet, rest in the horizontal position and artificial moist heat; lowering the head enough to make gravity aid in furnishing sufficient blood to nourish and excite the reflex centers; administration of oxygen and in some cases artificial respiration; the interstitial and intravenous injection of warm salt solution, particularly when there has been hemorrhage; administration of strychnin, digitalis, strophanthus, nitroglycerin and ergot, and the glandular extracts.

Chronic Spinal Neuritis.—A. C. Brush† found the chronic form to occur in eighteen per cent. in one hundred consecutive cases of all types of spinal neuritis which came under his care. It may be secondary to the acute form; or, more frequently, it may be chronic from the beginning and follow such causes as injury, alcohol, the metallic poisons, tuberculosis, malaria, and the different forms of malaria and gout. The inflammation may be confined to one nerve or a group of nerves, or it may involve a large number of nerves simultaneously or consecutively. The symptoms develop slowly and insidiously without constitutional disturbance. Clinically the cases may be divided into those in which the inflammation is confined to one or more nerves in the arm or leg, and those in which it involves a large number of nerves in different parts either simultaneously or consecutively. In seven cases, in which the neuritis was confined to the arm, the disease was of the chronic type from the beginning, and due to alcohol in three, to injury in two, and lead in two. The motor symptoms were much more marked than the sensory, and in all but one case the patients were left with decided weakness or complete paralysis associated with marked atrophy of the affected muscles. In the cases in which the neuritis is confined to the lower extremity, it most commonly involves the sciatic and its branches. Pain is a much more marked symptom in the leg than in the arm type. In the cases observed, the prognosis as to the motor symptoms has been much better than in the arm type, but the patients are usually left with frequent and severe attacks of pain in the affected nerves. In six cases of chronic form of multiple neuritis, the condition was chronic from the beginning, and due to alcohol in three, and in the others to parturition, arsenic, and rheumatism respectively. Symptoms are the same as in the local types, but pain is not, as a rule, prominent. The prognosis has been bad, for three died, one was left with complete paralysis and atrophy of his arms and legs, and two have terminated in locomotor ataxia.

*Jour. Amer. Med. Assn., Oct. 21, 1899.

†N. Y. Med. Jour., Oct. 14, 1899.

SURGERY.

Shock, Hemorrhage and Septicemia.—T. H. Wagner* recommends intravenous injection of normal salt-solution in all of these conditions. Two cases are reported, one of septicemia and one of typhoid fever, showing the marked beneficial effect of this method of treatment. The injection was given into the right basilic vein, and at the same time an assistant divided the vein in the left arm to allow deteriorated blood to escape. In the case of septicemia, 350 c.c. of blood was allowed to escape and 750 c.c. of salt-solution injected. In the case of typhoid fever, 500 c.c. of blood was withdrawn and 1500 c.c. of solution injected. The good effect was immediately noticeable. This method of treatment is advocated in all severe cases of septicemia, typhoid fever, malaria, uremia, and any condition in which the blood is charged with toxic material. The operation is a comparatively safe one and can be performed by any one having ordinary medical skill.

*Jour. Am. M. A., Oct. 14, 1899.

A New Intestinal Anastomosis Forceps.— A. McLEAN* has devised a pair of forceps with the view of performing intestinal anastomosis without the use of any device which must be left in the intestinal canal. The forceps are described and illustrated and the steps in the operation fully explained. An anastomosis can be made in a very short time with the aid of the forceps.

The Early Diagnosis of Cancer of the Stomach.—S. C. HEMMETER,† after a brief review of the statistics regarding the mortality from cancer, showing the remarkable increase in the number of deaths from this disease everywhere, dwells upon the diagnostic value of the subjective and objective symptoms. Of all the dyspeptic complaints, the vomiting and nausea when very frequent and copious are suggestive of cancer at the pylorus or at the cardia. Blood is contained in the vomit in one-half of all cases; the characteristic coffee-ground vomit is diagnostically important. In 75 per cent. of the cases there is constipation; this is due to the mechanical stenosis by the tumor and the motor insufficiency due to carcinomatous invasion of the muscularis. Emaciation and cachexia are important only for their influence upon the decision on an operation. The presence of free hydrochloric acid does not argue against cancer of the stomach, and on the other hand its absence is no specific sign of this disease, for it may be absent in other diseases, as in diseases of the kidneys, pulmonary tuberculosis, valvular cardiac diseases, and in catarrhal jaundice. The frequent occurrence of lactic acid in gastric cancer has been asserted to be an important diagnostic sign; but it does not occur at a time to enable us to make an early diagnosis. In the microscopic examination of stomach contents, there are two structural elements that have a possible diagnostic significance: 1. Tissue fragments, minute portions of the neoplasm. 2. The so-called Oppler-Boas bacilli. It is probable that the fragments are detached when metastases are already formed; but may be obtained earlier by curetting the walls of the stomach with a soft tube; the fragments can then be washed out by lavage and sedimented in the electric centrifuge. The presence of the Oppler-Boas bacillus is an important aid in the diagnosis. In an examination of 52 cases they were absent in only three cases. Demonstration of a tumor in the stomach is the most reliable evidence upon which to base a diagnosis; but it is not an early sign. It has been stated that gastric cancer should not be radically operated upon after it can once be diagnosed in the form of a tumor. The differential diagnosis between carcinoma and hypertrophic stenosis of the pylorus, diseases of the stomach associated with absence of hydrochloric acid, gastric neuroses, are discussed. Gastroscopic examination, electrodiaphany and the use of the X-ray have not as yet proven of much service in making a diagnosis of the presence or position of a gastric cancer. Only two methods exist for making an early diagnosis: curetting the stomach and examining the detritus, and exploratory laparotomy.

*Phila. Med. Jour., Oct. 21, 1899.
†N. Y. Med. Rec., Oct. 21, 1899.

Surgical Operations on the Heart and Pericardium.—A. PADREZ* presents an article which, to say the least, contains much that is instructive and at the same time novel. Injuries to the left ventricle are the least dangerous of any, on account of the contractility and elasticity of the thick walls. The right ventricle, on account of its position, is more frequently injured than any other of the heart chambers. On account of the arrangement of the cardiac muscle fibers a penetration may be absolutely unattended by bleeding; therefore the surgeon must not be misled, but must interfere early in some suspicious cases even though no hemorrhage be present. Padrez recommends the operation in which the sternum is sawed through just above the third costal cartilage, and in which the third, fourth and fifth cartilages are separated from the corresponding ribs on the left side. The author operated on one case which is remarkable from the fact that the patient is still supposed to be carrying a bullet in one of the chambers of the heart.

A Case of Congenital Deficiency of Both Clavicles.—W. F. HAMILTON† reports a case of this anomally. The subject was a fairly well-developed woman, 38 years of age, and unmarried. Her shoulders were sloping, and her gait was marked by slight swaying from side to side, with lordosis. She had "always been troubled with a weak back," and wore a plaster jacket for the last three years. Her first teeth were not lost till her fifteenth year, and the second teeth were very poorly developed, few of them appearing above the gums. The palate is high and arched; the upper teeth artificial. The joints generally are lax. There is double talipes planus, but no bone deformity nor deficiency was noticed, except that presented by the clavicle. The scapulas are somewhat winged when the patient is erect. Only the sternal end of each clavicle is present, without one-third of the shaft. Each ends abruptly about two and one-quarter inches from the sterno-clavicular articulation, and the remainder of the distance to the acromion process is spanned by a fibrous cord, more readily felt on the left than on the right side. All the ordinary movements of arms and shoulders are well performed, and the patient has experienced no disability on account of this abnormality. This case makes 21 now reported showing clavicular deficiency in some part. Two photographs are given.

*Revue de Chirurgie, May, 1899.
†Phil. Med. Jour., Oct. 14, 1899.